



REVIEW

Lip Measurements and Preferences in Asians and Hispanics: A Brief Review

ABSTRACT

Objective: Most literature regarding lip augmentation refers to Caucasian anthropometric measurements, but ethnic differences affect facial dimensions and the evaluation of beauty. Specifically with regard to Asians and Hispanics, dermatology does not have much literature on the subject. This review investigates the differences in lip measurements and preferences of Asians and Hispanics compared with those of Caucasians. **Design:** A literature search of other fields, including plastic surgery, maxillofacial surgery, orthodontics, and forensic anthropology, was conducted, and relevant articles were selected that applied to the discussion of lip measurements and preferences in Asians and Hispanics. **Results:** Lip measurements do appear to differ between Asians, Hispanics, and Caucasians, and ethnic background appears to influence lip preferences. **Conclusions:** It is inappropriate to use Caucasian measurements and generalizations in lip preferences when determining what is “ideal” when aesthetically augmenting lips among Asians and Hispanics. Ultimately, it is important to take into account the goals, anatomy, and ethnic background of each individual patient before performing lip augmentation.

KEYWORDS: lip measurements, lip preferences, lip augmentation, Hispanics, Asians

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Lip augmentation has become an increasingly popular cosmetic procedure, but the majority of published literature is based on the anthropometric measurements of Caucasians. In Caucasians, the ideal vertical height ratio of upper to lower lip is a well-documented 1:1.6.^{1,2} Ethnic differences, however, play a role in facial dimensions as well as in the evaluation of beauty. Specifically with regard to Asians and Hispanics, dermatology does not have much literature on the subject. In this review article, we examine available literature Asian and Hispanic lip measurements and preferences from other fields of medicine, including plastic surgery, maxillofacial surgery, orthodontics, and forensic anthropology, and describe and discuss the differences in measurements and preferences among Hispanics and Asians compared to Caucasians.

ASIAN LIP MEASUREMENTS

As would be expected, Asians have different lip measurements than Caucasians. Wong et al³ conducted a study comparing specific lip parameters between Caucasians, Chinese-Americans, and Korean-Americans. Using three-dimensional imaging technology, this study was able to measure lip landmarks using both caliper and surface distances measurements, which differ from one another because of the rounded nature of the lips. Using other software, the volume and surface area of subjects' lips were calculated as well. Significant differences

were found between the Asian groups when compared with the Caucasian group, especially with regard to the female subjects; however, differences were also found when comparing Chinese-Americans and Korean-Americans with each other.³

With regard to the women, Caucasian lips were found to be thinnest, with the smallest upper lip height and volume. Korean women had the highest ratio of upper lip to lower lip. Chinese women had the thickest lower lip, as well as the greatest upper lip volume. Male lips were found to be more similar to each other across ethnic groups; however, Caucasians men had the thinnest lips. Men of Chinese descent had the largest total lip volume.³

Regarding upper lip (measured from the midline of the upper lip vermilion border) to lower lip height ratio, Chinese women were found to have a mean ratio of 1:1.25 when measured both by caliper and surface distance. Korean women were found to have a ratio of 1:1.11 when measured by caliper and 1:1.25 when measured by surface distance. Caucasian women had the smallest ratio at 1:1.43, as measured both by caliper and surface distance. Korean female lip ratios were significantly different from those in Caucasians. Chinese, Korean, and Caucasian men were all found to have a mean lip ratio of 1:1.25 with no significant differences found.³

Jayarathne et al⁴ published a similar study that used three-dimensional facial photographs

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to evaluate the orolabial region of Chinese participants. Measurements included upper and lower lip vermilion height. Mean female upper vermilion height was found to be 9.09mm and mean lower vermilion height was 9.79mm, yielding an upper lip to lower lip ratio of 1:1.08. Mean male upper vermilion height was found to be 10.20mm and mean lower vermilion height was 10.98mm, also resulting in a ratio of 1:1.08. These results were compared with those of a similar anthropometric analysis of Caucasians done by Farkas,⁵ and, ultimately, Chinese men were found to have larger upper and lower lip vermilion heights than Caucasians. Chinese women, however, had similar measurements to their Caucasian counterparts.² This contrasts with the findings of the study by Wong et al,³ which noted significant differences between Chinese and Caucasian upper and lower lip measurements.

Another study, performed by loi et al,⁶ investigated the vermilion height found most attractive by Japanese and Korean orthodontists and orthodontic patients. The subjects rated, according to their preferences, altered photographs in which vermilion height was adjusted to various sizes. Based on their results, a pair of “average lips” has measurements of 7.8mm for the upper lip at the midline and 12.2mm for the lower lip. This gives an upper to lower lip ratio of 1:1.56. However, it is unclear how this “average” value was chosen in the study, and it appears very different from the average values published in the two studies mentioned previously.^{3,4}

Lemperle et al⁷ describe a method for calculating a lip Index based off objective lip measurements, including vermilion height, that can be used to quantitatively measure the effects of a lip augmentation with dermal fillers. Based on an analysis of 40 pairs of lips, Caucasian women were found to have an overall lip index between 50 and 100, while Asian women had a lip index between 100 and 200. Because a larger lip index correlates with fuller lips, this study suggested that Asian women have fuller lips on average than Caucasian women. In regard to what is “average” among Asians, different studies have obtained varying results, highlighting the need for more research in this area.

ASIAN LIP PREFERENCES

Based on different cultural and ethnic backgrounds, it is likely that what Asians believe

to be an attractive pair of lips differs from what Caucasians believe to be attractive. The study by loi et al,⁶ described earlier, investigated what vermilion height was found to be the most attractive by Japanese and Korean orthodontists and orthodontic patients. Researchers took a photo with average vermilion heights (7.8mm for the upper lip measured at the midline and 12.2mm for the lower lip) and altered it by increasing or decreasing the vermilion heights by 1mm to achieve a range of -3mm to +3mm from average. Subjects were told to rate these seven pictures from most attractive to least attractive. Everyone (male and female, Japanese and Korean, orthodontist and patient) rated the average, unaltered photo as the most attractive. Aesthetic scores consistently increased from -3 to 0, and then decreased from 0 to +3. The +3 photo was rated most unattractive by all groups. The Korean female patients rated the +1 photo as more attractive than Japanese female patients did, but overall they still preferred the average photo best. This suggests that Korean women tolerate slightly larger lips than their Japanese counterparts. Japanese male patients rated negative values more highly than the other groups rated them, suggesting that male patients have a broader tolerance for vermilion height changes than do female patients or orthodontists.⁶ However, it is interesting to note that the average values the researchers used that were subsequently judged most attractive give an upper to lower lip ratio of 1:1.56, which is close to the 1:1.6 ratio defined as “ideal” in Caucasians.^{1,2}

In the study by Wong et al³, judges of various ethnicities (including Caucasian, Chinese, Korean, Vietnamese, Indian, Hispanic, and African) rated lips and faces based on their attractiveness. Korean men and women were judged to have the most attractive lips, but the least attractive faces, while Caucasian men and women were judged to have the least attractive lips, but the most attractive faces. Interestingly, the lips did not seem to contribute much to overall facial attractiveness. This contrasts with the results from a study by Chan et al,⁸ which found that the upper and lower lips were among the most important factors when Caucasian examiners ranked Chinese profiles.

The anthropometric measurements of the lips judged most attractive in the study by Wong et

al³ were also evaluated. The lips that were rated as most attractive shared similar parameters in that all were smaller than average, specifically smaller upper lip surface midline height, smaller paramedian lip surface height, and smaller lower lip volume.³ This correlates with the findings of loi et al⁶ (i.e., that smaller lips are preferred) and is exactly opposite of the current trend that suggests that most people think larger lips are more beautiful.

Dobke et al⁹ investigated differences in facial feature preferences between Japanese and Korean women. They found that Japanese women prefer thinner lips, while Korean women prefer fuller lips. This also compares similarly with the results from the study by loi et al,⁶ which found that Korean women better tolerate slightly larger lips than their Japanese counterparts. Both of these studies highlight that ideals of beauty cannot be generalized to all Asians.

An article by Heidekrueger et al¹⁰ describes the results of a survey sent to plastic surgeons and laypersons worldwide with the aims of discovering if demographic information affects lip size preferences. Surgeons who practice in Asia were found to prefer the largest lips, while those who practice in North America and Europe prefer the smallest. Of note, the sex or age of the plastic surgeon did not significantly affect lip size preferences. Laypersons in North America and Europe preferred an intermediate size lip, and Asians preferred the smallest. It is especially curious that surgeons in Asia preferred the largest lips, while laypersons in Asia preferred the smallest lips. The researchers postulate that surgeons sometimes overestimate what people desire, or that laypersons do not realize what lip augmentation can easily achieve. At any rate, this study provides evidence that “ideal” lip dimensions vary greatly not only across different ethnic and geographic backgrounds but also within certain ethnic and geographic backgrounds.

Finally, in a study by Oh et al,¹¹ Chinese and United States orthodontists ranked photos of Chinese and United States patients based on subjective attractiveness. These rankings were then correlated with objective measurements. Regarding lip size, both Chinese and United States orthodontists ranked patients from the United States with more prominent lower lips as more attractive, but there was no similar correlation for Chinese patients. This is yet

another study that suggests thinner lips are more preferred by Asians. While Asians appear to prefer smaller lips than their Caucasian counterparts, it is also important to note that variations in preference among Asians also exist, with Koreans seeming to tolerate slightly larger lips.

HISPANIC LIP MEASUREMENTS

Very little has been published regarding lip measurements in Hispanics patients. In a study published in the *American Journal of Orthodontics and Dentofacial Orthopedics*, Vela et al¹² collected data about soft-tissue facial profiles of Mexican-Americans in order to understand differences between them and European-Americans. They found that the upper and lower lips of Mexican-Americans were 2 to 3mm and 0.6 to 2.4mm more protrusive, respectively, as compared with those of European Americans. Part of this is due to teeth-related factors, but another significant component is the greater soft-tissue thickness found in Mexican-Americans. They also found a significant difference in the distance from the labiale superius to the upper incisor between Mexican-Americans and European-Americans, measured to be 13.24mm and 13.87mm, respectively. However, this is not quite the same as vermilion height, which is the distance from the vermilion border to the stomion.

Farrera et al¹³ investigated phenotypic variation in the facial parameters of Mexican individuals to improve facial reconstruction procedures. They analyzed a large dataset of photos of both male and female Mexicans, ranging in age from 14 to 69 years. While lip measurements were taken as a part of this study, the results did not contain any specific numbers. No studies were found that measured vermilion height or compared upper lip to lower lip ratios in Hispanics. While Hispanics appear to have naturally larger lips than Caucasians, there is a need for more research regarding lip measurements in Hispanics.

HISPANIC LIP PREFERENCES

In addition to Asian, United States, and European lip preferences, Heidekrueger et al¹⁰ discuss Latin American lip ideals in their study that aimed to discover how demographic information affects lip size preferences. When compared with laypersons in all other demographic groups, laypersons in Latin America favored the largest lips of all. Latin American surgeons also preferred relatively large lips, second only to the Asian surgeons. Based on this data, Latin Americans seem to prefer larger lips than their United States and European counterparts. No other studies were identified that discussed the lip preferences of Hispanics.

CONCLUSION

Conflicting data exist regarding lip measurements in Asians, and very little has been published on lip measurements in Hispanics, highlighting the need for more research in both of these areas. However, lip measurements do appear to differ between Asians, Hispanics, and Caucasians, indicating that using Caucasian anthropometric measurements when attempting to determine what is "ideal" for other ethnicities when injecting filler is not ideal. Lip preferences are also influenced by ethnic background, so generalizations in preferences should be avoided as well. Ultimately, it is important to take into account the goals, anatomy, and ethnic background of each individual before performing lip augmentation.

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